COASTAL CONSERVANCY

Staff Recommendation
June 5, 2008

WOODACRE CREEK FISH PASSAGE IMPROVEMENT

File No. 08-041-01
Project Manager: Joel Gerwein

RECOMMENDED ACTION: Authorization to disburse up to $185,000 to the County of Marin to fund the construction of a fish passage improvement project in Woodacre Creek at its intersection with Carson Road.

LOCATION: Woodacre Creek, tributary to Lagunitas Creek, in the town of Woodacre, Marin County (Exhibit 1).

PROGRAM CATEGORY: Resource Enhancement

EXHIBITS

Exhibit 1: Project Location and Site Maps

Exhibit 2: Site photos

Exhibit 3: Site design report

Exhibit 4: Letters of Support

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31251-31270 of the Public Resources Code:

"The State Coastal Conservancy hereby authorizes the disbursement of an amount not to exceed $185,000 (one hundred eighty-five thousand dollars) to the County of Marin (the "County") to fund the construction of a fish passage improvement in Woodacre Creek at Carson Road, subject to the following conditions:

1. Prior to the disbursement of funds for the project, the County shall submit for the review and written approval of the Executive Officer of the Conservancy:
   a. A work program, including schedule, budget and detailed site plans for the project and a plan for a minimum of three years of post-implementation monitoring to evaluate the success of the project.
   b. The names and qualifications of any contractors to be employed on the

project.

c. Documentation that all permits and approvals necessary to the completion of the project have been obtained."

Staff further recommends that the Conservancy adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed projects are consistent with the purposes and criteria set forth in Chapter 6 of Division 21 (sections 31251 – 31270) of the Public Resources Code, regarding the enhancement of coastal resources.
2. The proposed authorization is consistent with the Project Selection Criteria and Guidelines adopted by the Conservancy on September 20, 2007.
3. The project area has been identified in the certified Local Coastal Plan of Marin as requiring public action to resolve existing or potential resource protection problems."

PROJECT SUMMARY:

The proposed authorization would enable Marin County (the "County") to build an important fish passage improvement project on Woodacre Creek (the "project"), a coho salmon-bearing stream, at the intersection of Carson Road (Exhibit 1). Doing so would improve access to 3,800 feet of good quality upstream spawning and rearing habitat, thus facilitating the recovery of salmonids within the watershed. The purpose of this project is to improve fish passage in Woodacre Creek where barriers to fish passage have resulted from the inappropriate design and construction of road crossings.

A county-wide assessment of barriers to fish passage ranked this project 14th in order of importance relative to more than one hundred other sites assessed during the survey. The existing culverts pose a total passage barrier for juvenile salmonids, and a partial barrier to adult salmon, primarily due to the high flow velocities generated as water passes through the small diameter culverts. Fish capable of ascending such barriers are often too fatigued to spawn. Fish prevented from ascending such structures typically congregate in discharge pools or other areas below the structure, where they may fall prey to predators or poachers. Moreover, undersized culverts such as the ones at Carson Road often result in flooding of the road crossing and of nearby property.

The proposed project would replace the existing double-barreled, 55-foot long culvert with an open-bottom culvert consisting of a steel arch set on concrete footings. The proposed arch culvert would be 20' wide, matching the existing bankfull channel width and accommodating the estimated 100 year peak flow, in contrast with the existing 4' diameter and 5' diameter side-by-side culverts (Exhibits 2 and 3). A naturalized channel bottom with a substrate and slope matching the adjacent stream channel would be constructed within the bottomless arch culvert.

The two adjacent neighbors have signed landowner access agreements and are extremely supportive of the project. One of these two landowners is in the process of restoring his entire

property along Woodacre Creek to prepare it for sale, and he is in agreement with the County that the project should be implemented while the property is being refurbished and before it changes ownership.

The opportunity to recover fish populations while improving local roads and infrastructure and diminishing future maintenance costs has made some county governments, including the County of Marin, keen participants in fish passage improvement projects. However, the ability of county governments or private entities to implement fish passage improvement projects is limited. This grant would implement a high priority fish passage improvement project, thereby expediting the recovery of habitat for anadromous fish and other aquatic species found in coastal watersheds.

The objective of the project is to restore healthy populations of coho salmon and steelhead to Woodacre Creek, one of the most important salmon production subwatersheds in the Lagunitas Creek watershed. Sixty years ago, the annual coho population in the Lagunitas Creek watershed is estimated to have been approximately 6,000. Coho salmon populations declined to tens of fish spawning in the early 1980s. However, the watershed has been the focus of restoration efforts for the last 20 years, and coho salmon numbers have risen to an average of 500 adults in the past few years. The creek system also supports a robust population of steelhead trout. Chinook and chum salmon have been observed in small numbers in recent years. Though greatly reduced from its historic numbers, the coho in the Lagunitas Creek watershed represent 10-15% of all wild California coho surviving today. The Central California population of coho salmon is listed as endangered under both the U.S. Endangered Species Act (2005) and the California Endangered Species Act (2005). Woodacre Creek currently produces approximately eleven percent of the spawning productivity in the Lagunitas system, and could provide more if free passage would be afforded the migratory salmon and steelhead of that watershed.

The enhancement potential for Woodacre Creek is high for a variety of reasons. First, the watershed already meets the general criteria for coho salmon use, and the subwatershed hosts approximately eleven percent of the spawning coho salmon in the Lagunitas Creek watershed. Second, the County has committed substantial resources to developing a long-term resource enhancement program for its watersheds, including the establishment of a public works program specifically dedicated to fish passage improvement. County staff have successfully replaced or retrofitted three fish passage barriers on Woodacre Creek since 2005. The double barreled culvert at Carson Road is the last major fish passage barrier on Woodacre Creek. Apart from the Carson Road barrier, the only remaining barrier on Woodacre Creek is a small, less critical crossing on the East Fork of the creek that the County plans to replace in 2010. Third, the Point Reyes National Seashore is conducting a variety of other enhancement measures in the Lagunitas Creek watershed, such as the Bear Valley Creek Watershed Enhancement Program and Olema Marsh and Giacomini Wetland restorations, which will further improve nearby habitat. Last, and perhaps most importantly, the presence of relatively stable coho and steelhead populations in the portions of the Lagunitas creek watershed that are accessible to salmon and steelhead promise rapid recolonization of the habitat upstream of the Carson Road barrier on Woodacre Creek.

The County is committed to maintaining the arched culvert that will be constructed as part of its ongoing road infrastructure maintenance, and will implement a three year post-implementation monitoring program.

Site Description: Woodacre Creek is a tributary of San Geronimo Creek, which, in turn is a

tributary of Lagunitas Creek and Tomales Bay. The Lagunitas Creek watershed, 103 square miles in size, is the largest watershed in Marin County and represents the largest drainage area into Tomales Bay and the Gulf of the Farallones National Marine Sanctuary. It flows from its headwaters on the north slope of Mt. Tamalpais, draining a large part of the central portion of West Marin. It traverses four reservoirs to the southern end of Tomales Bay. Woodacre Creek and its East and West Forks are important spawning and rearing grounds for coho salmon. Much of the historic habitat for steelhead and salmon in this watershed was lost with the construction of the four reservoirs.

The habitat upstream of the crossing was evaluated during the County's culvert assessment study by Ross Taylor and Associates, and was classified as "good salmonid habitat" with a riparian corridor mostly comprised of mature, second growth redwood and Douglas fir with red alder, bay laurel, big leaf maple and an understory of chain fern, sword fern, coffee berry, wild rose, and poison oak, and a thick carpet of forest floor duff. Water temperatures at the project site remain cool, ranging from 8ºC in the winter to 16ºC in the summer, largely due to the ample shade canopy. Deep pools and areas with good-quality spawning substrate are also present upstream of Carson Road.

Project History: The proposed project is part of a larger effort by the Conservancy to improve the long term prospects for statewide fish passage by encouraging county governments and the California Department of Transportation to coordinate infrastructure planning with management of aquatic resources. If coastal streams are to remain viable habitat for Pacific salmon, protecting or defragmenting aquatic habitat must evolve as coequal priorities with infrastructure development and repair. The County of Marin has demonstrated the willingness to make this transition away from a solitary focus on infrastructure that is constructed and maintained in a fashion that adversely affects aquatic resources. For many years the County of Marin has been an active partner in developing a reliable and ambitious fish passage improvement program housed within the Department of Public Works.

This effort has succeeded in part due to the provision of Conservancy funding both to the County and to other entities. The Coastal Conservancy has made substantial commitments over the years to protecting and enhancing the coastal watersheds of Marin County. The Conservancy has been especially active in Tomales Bay and its 232 square mile watershed, an area noted for its beauty and diversity of wildlife.

The Conservancy granted $35,000 to the Urban Creeks Council on August 2, 2001 to design a fish passage improvement project at the Woodacre Creek Improvement Club. With assistance from the County, that project has now been built. The Conservancy granted $65,000 dollars to the County of Marin in March 2002 to conduct an assessment of barriers obstructing passage of anadromous fish within the coastal watersheds of Marin County.

In June 2005, the Conservancy disbursed $196,500 to the County of Marin to fund a Marin Fish Passage Improvement Program for engineering and design of seven high priority fish passage improvement projects in the Woodacre and Redwood creek watersheds. The Carson Road crossing was one of the projects designed under this grant, so it is fitting and encouraging that implementation of this earlier planned project will proceed expeditiously.

At its May 18, 2005 meeting, the Conservancy authorized $225,000 to the Point Reyes National

Seashore Association to conduct a similar fish passage improvement program for nearby Bear Valley Creek, also a tributary of Lagunitas Creek. Two of seven barriers in that watershed have been repaired, plans for five are complete, and the County is now examining their role in ameliorating a County barrier at the downstream end of this watershed.

County staff initially contacted Conservancy staff in March 2008 regarding the proposed project. Despite this short notice, Conservancy staff has worked swiftly with the County and other co-funders to assess the project and determine its suitability for Conservancy funding. Staff concludes that the project is worthy of funding, and, if funded, would be constructed this summer. Funding that would normally be available to support this project from the California Department of Fish and Game ("DFG") is not available this year due to budget cuts, though DFG was able to redirect some prior funding to the project. Without Conservancy participation, the project will not proceed.

PROJECT FINANCING:

Coastal Conservancy	$185,000
California Department of Fish and Game	$60,000
County of Marin	$150,000
Total	**$395,000**

The expected source of Conservancy funds for this project is the Conservancy's fiscal year 2005-2006 appropriation from the Water Security, Clean Drinking Water Coastal Beach Protection Fund of 2002 ("Proposition 50"). This project is consistent with Proposition 50 because it will restore coastal watersheds by improving habitat quality in a coastal watershed, in accordance with Division 21 of the Public Resources Code and will protect watershed resources within the project area consistent with local and regional watershed plans, as described below. *See* Water Code § 79507.

The County will ensure the provision of adequate matching funds and in-kind contributions to ensure project completion.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The proposed project is undertaken pursuant to Chapter 6 of Division 21 of the Public Resources Code Sections 31251-31270.

Under Section 31251, the Conservancy may award grants to local public agencies and non-profit organizations for the purpose of enhancement of coastal resources which, because of human-induced events, or incompatible land uses, have suffered loss of natural and scenic values. Consistent with this section, the proposed authorization provides funds to the County to enhance coastal fishery resources disturbed by incompatible land uses, such as inappropriate culvert installation.

Under §31251.2(a), "In order to enhance the natural or scenic character of coastal resources within the coastal zone, the Conservancy may undertake a project or award a grant…to enhance

a watershed resource that is partly outside of the coastal zone" at the request of a local agency having jurisdiction over the project. Consistent with this section, the County requested Conservancy assistance with this project located outside the coastal zone. This assistance was sought in order to benefit salmon populations known to travel many miles upstream of the coastal zone boundary in order to fulfill their life history patterns. Indeed, salmon depend on unimpeded access to high quality habitat both within and outside of the coastal zone in order to survive. If salmon and other highly prized aquatic resources are to be maintained and restored to historic levels, funding must be provided to improve salmonid access to habitat both inside and outside the coastal zone. The DFG is also highly supportive of this project, and a letter of support for this authorization from the DFG is included in Exhibit 3.

Pursuant to Section 31252, all areas proposed for resource enhancement should be identified in a certified local coastal plan or program as requiring public action to resolve existing or potential resource problems. Woodacre Creek meets the criteria of coastal streams established within Unit II of the Marin County Local Coastal Programs ("LCP"), and is therefore subject to the protections, goals, and objectives afforded by the LCP. In particular, the LCP cites Section 30231 of the Coastal Act which establishes that "the biological productivity and the quality of coastal waters…shall be maintained and, where feasible, restored…." (Marin County, Local Coastal Plan, Unit II (December 9, 1980) at p. 73).

Finally, pursuant to Section 31253, "(the) Conservancy may provide up to the total of the cost of any coastal resource enhancement project…." and the amount of the Conservancy contribution shall be determined only after an assessment of funding generally available and other factors prescribed by the Conservancy. The proposed contribution by the Conservancy was determined based on application of priority criteria, as discussed below, and after taking into account other available resources and the matching contributions to the project by other funding sources.

CONSISTENCY WITH CONSERVANCY'S STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 6 Objective D** of the Conservancy's Strategic Plan, the proposed authorization will implement a fish barrier removal project that will open 3,800 feet of rearing and spawning habitat to fish.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on September 20, 2007, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.

3. **Support of the public:** Supporters of this project include the DFG, the National Marine Fisheries Service, and Assemblymember Jared Huffman. Letters of support are included in Exhibit 4.
4. **Location:** The Carson Road crossing of Woodacre Creek is located in the town of Woodacre, in Western Marin County. The Woodacre Creek watershed is located outside the coastal zone, but it provides critical habitat to maintain and restore salmon and steelhead populations.
5. **Need:** Due to an unexpected shortfall in funding from the DFG, this project will not proceed without funding from the Conservancy.
6. **Greater-than-local interest:** Lagunitas Creek, to which Woodacre Creek is tributary, is identified as a rank 5, or highest priority recovery site in the 2004 Recovery Strategy for California Coho Salmon (DFG, Recovery Strategy for California Coho Salmon (February 2004) at p. 6.60 ("Recovery Strategy")). This project is consistent with recommendation BM-LA-03, which states "(c)oordinate with appropriate agencies to restore coho salmon passage at barriers identified by Ross Taylor, SPAWN, and others." (Recovery Strategy at p. 8.45).

Additional Criteria

7. **Urgency:** Coho salmon are currently at 6 to 15% of their abundance during the 1940s. Given this decline, and in light of the State Recovery Strategy's primary objective of returning coho salmon to a level of sustained viability, while protecting their genetic integrity, enhancement projects with a high potential for recovering local populations of coho salmon are a high priority for the State. The adjacent landowners have been very supportive of the project, and have signed landowner access agreements. One of these landowners is currently preparing his property for sale. If this specific project is not implemented in 2008, it may become more difficult to implement if a future landowner is unwilling to provide access.
8. **Leverage:** See the "Project Financing" section above.
9. **Innovation:** This project will be implemented through the County of Marin's long-term Public Works Department program for addressing habitat and fish passage barrier problems associated with County infrastructure. The County's Public Works program shows foresight and dedication to resolving a challenging issue of resource degradation that is commendable and innovative.
10. **Readiness:** The project design was completed in August 2007, and the County of Marin has demonstrated that it has the expertise, local public support, and administrative capability necessary to commence and complete the project in a timely fashion.
11. **Realization of prior Conservancy goals:** "See "Project History" above."

CONSISTENCY WITH COASTAL ACT AND LOCAL COASTAL PROGRAM POLICIES:

The project will result in the completion of a fish passage improvement project for a portion of the Lagunitas Creek watershed. This project will enhance the scenic values and wildlife habitat values of the watershed. The proposed project is therefore consistent with the Coastal Act,

section 30231 which states "(t)he biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained, and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of groundwater supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams." (Pub. Res. Code § 30231). By reversing inappropriate land use practices, the proposed project will expand, protect and enhance the aquatic and riparian habitat of Woodacre creek for the benefit of federally listed salmonids. The proposed project is therefore consistent with this section.

Units I and II of the Marin County LCP identify Marin's numerous coastal zone streams and creeks as sensitive habitats for many species of birds and fish. Lagunitas Creek, of which Woodacre is a tributary, contains runs of coho and steelhead specifically highlighted. (LCP, Unit II at p. 65).

Freshwater inflows, sedimentation, water pollution, and protection of riparian habitats are identified as the key concerns for protecting the aquatic resources of the Lagunitas Creek watershed, and the Tomales Bay ecosystem into which Lagunitas flows. (LCP, Unit II at pp. 66-67). Because the proposed project will restore salmonid access to a portion of the Lagunitas Creek watershed, restore the in-stream habitat of the project areas, and improve sediment transport by restoring natural geomorphologic processes, the proposed project is entirely consistent with the LCP Policies.

CONSISTENCY WITH LOCAL WATERSHED MANAGEMENT PLAN AND REGIONAL WATER QUALITY CONTROL PLAN:

The Project is consistent with, and furthers the goals of, the Tomales Bay Watershed Stewardship Plan, prepared by the Tomales Bay Watershed Council in July 2003. The project is consistent with Goal B of the Tomales Bay Watershed Stewardship Plan, as implementation of the plan would improve the integrity of natural habitats and native communities.

The project is also consistent with the Tomales Bay Integrated Coastal Watershed Management Plan ("ICWMP"), completed in September 2007. The ICWMP is a cooperative effort by the Tomales Bay Watershed Council, Bolinas Community Public Utilities District, Inverness Public Utility District, Marin Municipal Water District, and North Marin Water District to identify management strategies and regional and projects that meet multiple objectives for the Tomales Bay region. The project is consistent with ICWMP Objective 5, as implementation of the plan would improve streams and riparian areas for native species (ICWMP at p. 3-12). The project is consistent with ICWMP Objective 6, as implementation of the plan would improve habitats of special status species (ICWMP at p. 3-12).

The proposed project is also consistent with the Water Quality Control Plan for the San Francisco Bay Basin (adopted by the Regional Water Quality Control Board Central Coast Region in 1995 and reviewed every three years ("Water Quality Control Plan") in that it constitutes an important step towards the enhancement of fish and wildlife habitat, including habitat for federally-listed species steelhead and coho salmon in the Lagunitas Creek watershed,

of which Woodacre Creek is a part. The project will protect and improve the following beneficial uses identified for the Lagunitas Creek watershed in the Water Quality Control Plan:

- Cold Freshwater Habitat
- Wildlife Habitat
- Preservation of Rare and Endangered Species
- Fish Migration
- Fish Spawning

(Table 2-1 in Water Quality Control Plan).

COMPLIANCE WITH CEQA:

Small habitat restoration projects are categorically exempt from the California Environmental Quality Act ("CEQA"), under 14 California Code of Regulations Section 15333. This project complies with the requirements for this exemption because the project is less than five acres in size. (CEQA Guidelines, 14 California Code of Regulations Section 15333(a-d)).

The project, which seeks to replace an outdated, fish-blocking culvert with an arched, natural bottom culvert, falls within the description of small scale, restoration projects that are exempt under Section 15333. Consistent with Section 15333(a), Conservancy staff has consulted with staff from DFG and has determined that there would be no significant adverse impact on endangered, rare or threatened species or their habitat because the project construction will be conducted in accordance with the same set of standards and guidelines outlined in Chapter 9 ("Guidance to Minimize Impacts During Stream Crossing Construction") of DFG's California Salmonid Stream Habitat Restoration. Erosion control measures, careful selection of field season to avoid presence of listed species, and other measures will ensure adequate protection of listed species in the project area. Consistent with Section 15333(b), there are no hazardous materials at or around the project site that may be disturbed or removed. The project will not result in impacts that are significant when viewed in connection with the effects of past, current or probable future projects, consistent with Section 15333(c). And consistent with Section 15333(d), this type of project is specifically mentioned in subsection (6), which cites culvert replacement as an example of projects intended to be exempt under this section.

For similar reasons, the project is also categorically exempt from CEQA review under 14 Cal Code of Regulations Section 15302, relating to the replacement or reconstruction of existing structures and facilities "where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced." The culvert at Carson Road will replace an existing double barreled culvert that is a barrier to fish passage. The culvert will be in the same general location, will serve the same purpose, but will create more favorable environmental condition than currently exists. In particular, the replacement will result in diminished environmental impacts to threatened salmonid species.

Upon Conservancy approval, staff will file a Notice of Exemption for the project.